Benzene alkylation with ...

unsaturated compounds, 10-11% of which was C_2H_4, the remainder propylene with traces of higher olefins. $AlCl_3$ was a commercial preparation, $AlCl_2 \cdot H_2PO_4$ was prepared by slow addition of an equimolecular amount of anhydrous H_3PO_4 to $AlCl_3$ and 10-12 hr of heating at 80°C until the stopping of intensive HCl evolution. $AlCl_2 \cdot HSO_4$, by equimolecular addition of H_2SO_4 (sp.gr. = 1.84) to $AlCl_3$, heating to 110-120°C. $BF_3 \cdot H_3PO_4$ was obtained by saturation of 100% H_3PO_4 with BF_3. Alkylation was performed in a round-bottom flask with introduction of the gas amount calculated. Every 2 hr, gas samples were taken before and after the flask, and tested for C_2H_4, $CH_3-CH-CH_2$, CO_2 and O_2 by means of an Orsat apparatus. Two layers were formed after 0.5 - 1 hr of stirring and standing overnight. With the use of $BF_3 \cdot H_3PO_4$, only the upper layer contained hydrocarbons. It was washed, treated with 5-10% alkali, washed, dried with $CaCl_2$, and distilled. With the use of aluminum catalysts, the mixture was poured

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Benzene alkylation with ...

S/153/61/004/001/006/009
B110/B203

intavice water with HCl to decompose organic aluminum complexes. Four main fractions were present in the distillates, ethyl benzene, isopropyl benzene, dialkyl benzene, and polyalkyl benzene. There are 2 tables and 15 references: 11 Soviet-bloc and 4 non-Soviet-bloc. The reference to the English language publication reads as follows: Ref. 8: A. A. Francis, Chem. Revs., 42, 257 (1948).

ASSOCIATION: Voronezhskiy gosudarstvennyy universitet, kafedra organicheskoy khimii (Voronezh State University, Department of Organic Chemistry)

SUBMITTED: February 17, 1959

Card 4/4

ZAVGORODNIY, S.V.; FILINOV, G.P.

Synthesis of p-isopropyl-sec-butylbenzene and its autoxidation. Izv.vys.ucheb.zav; khim. i khim.tekh. 4 no.5:792-797 '61. (MIRA 14:11)

1. Voronezhskiy gosudarstvennyy universitet, kafedra organicheskoy khimii.

(Benzene) (Oxidation)

89842

S/074/61/030/003/001/001
B117/B202

5.3300

AUTHOR: Zavgorodniy, S. V.

TITLE: Hydroperoxides of alkyl aromatic hydrocarbons and their derivatives

PERIODICAL: Uspekhi khimii, v. 30, no. 3, 1961, 345-385

TEXT: This is a survey of papers on studies of the liquid-phase oxidation of aromatic hydrocarbons and their derivatives with molecular oxygen, i.e., so-called autoxidation. In the USSR K. I. Ivanov, P. G. Sergeyev, T. I. Yurzhenko, B. F. Yerofeyev and their collaborators as well as other scientists greatly contributed to the solution of problems of liquid-phase oxidation of hydrocarbons to hydroperoxides. Thus, methods could be obtained for the production of concentrated hydroperoxides, for their qualitative and quantitative determination in solutions, for their production in pure state and for their conversion into valuable commercial products. A large number of monographs and surveys exists on organic peroxides and hydroperoxides. In textbooks of organic chemistry special sections are devoted to organic peroxides and hydroperoxides. Every year,

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Card 1/4

periodicals contain dozens of original papers in which the autoxidation of hydrocarbons is dealt with. In 1958 more than 60 abstracts of papers and patents were published in the RZhKhim. These facts indicate the great importance of autoxidation of hydrocarbons. The first chapter of the present survey deals with the liquid-phase autoxidation of alkyl aromatic hydrocarbons. The author mentions that in the USSR the first large plant for the production of phenol and acetone via i-propyl benzene hydroperoxide has been put into operation in 1946. The second chapter deals with the progress achieved in the field of liquid-phase oxidation of dialkyl benzenes to hydroperoxides. Up to now only few, mainly patent communications have been issued on this field. In the third chapter the author deals with the hardly investigated liquid-phase oxidation of trialkyl benzenes. The fourth chapter is devoted to liquid-phase oxidation of multinuclear aromatic hydrocarbons: A. Oxidation of hydrocarbons with separated benzene nuclei, and B. oxidation of hydrocarbons with condensed benzene nuclei. In the fifth chapter which deals with the liquid-phase oxidation of alkyl benzene derivatives, the author discusses a) oxidation of alkyl halide benzenes; b) oxidation of oxygen-containing compounds; c) oxidation of alkyl nitrobenzenes. In the sixth chapter the author

mentions the methods which can be employed for separating and decomposing hydroperoxides. In the seventh chapter the author discusses the mechanism of liquid-phase oxidation of alkyl aromatic hydrocarbons. The author states that the mechanism of liquid-phase oxidation of alkyl aromatic hydrocarbons is based on the theory established by A. N. Bakh (Izbrannyye trudy, Izd. AN SSSR, 1950, str. 144) which, later on, was developed by N. N. Semenov (O nekotorykh problemakh khimicheskoy kinetiki i reaktsionnoy sposobnosti, Izd. AN SSSR, 1954) as a free-radical chain mechanism. In the eigth chapter the author deals with the mechanism and the kinetics of the cleavage of hydroperoxides, in the ninth chapter with the cleavage of hydroperoxides into phenols and aliphatic ketones. The tenth chapter deals with the cleavage of hydroperoxides into alcohols, aldehydes or ketones. In the eleventh chapter the author describes the formation of peroxides, and in the twelfth chapter he reports on the application of hydroperoxides as polymerization initiators. V. V. Fedorova, A.M. Sladkov, M. S. Nemtsov, B. D. Kruzhalov, R. Yu. Udris. O. A. Kolmakov, B. I. Golovanenko, M. S. Eventova, R. N. Volkov, V. A. Puchin, P. M. Kuznetsov, P. G. Ivanov, G. A. Razuvayev, Ye. D. Vilyanskaya,

89842

S/074/61/030/003/001/001
B117/B202

Hydroperoxides of alkyl aromatic...

R. V. Kucher, N. A. Sokolov, V. A. Shushunov, I. I. Chishevskaya, E. B. Idel'chik are mentioned. There are 9 figures, 1 table, and 438 references: 104 Soviet-bloc and 334 non-Soviet-bloc.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnic Institute)

Card 4/4

SHALGANOVA, V.G.; ZAVGORODNIY, S.V.

Autoxidation of p-sec-butyltoluene. Zhur.ob.khim. 30 no.10:3223-3226 O '61. (MIRA 14:4)

1. Voronezhskiy gosudarstvennyy universitet.
(Toluene)

KRYUCHKOVA, V.G.; ZAVGORODNIY, S.V.

Alkylation of o-bromophenol by propylene, 1-pentene, and 2-pentene.
Zhur. ob. khim. 31 no.2:274-277 F '61. (MIRA 14:2)

1. Voronezhskiy gosudarstvennyy universitet.
(Phenol) (Pentene) (Propene)

ZAVGORODNIY, S.V.; GONSOVSKAYA, T.B.; SHVETSOVA, L.S.; SIDEL'NIKOVA, V.I.; VAKHTIN, V.G.

Use of the compound $AlCl_3$ H_2PO_4 as the catalyst in the alkylation of aromatic hydrocarbons by olefins. Zhur. ob. khim. 31 no.3:726-731 Mr '61. (MIRA 14:3)

1. Voronezhskiy gosudarstvennyy universitet.
(Aluminum chloride) (Alkylation)

KRYUCHKOVA, V.G.; ZAVGORODNIY, S. V.

Alkylation of o-bromoanisole by propylene, 2-butene, and cyclohexene in the presence of $BF_3H_3PO_4$. Zhur.ob. khim. 31 no.3:731-733 Mr '61. (MIRA 14:3)

1. Voronezhskiy gosudarstvennyy universitet.
(Alkylation) (Anisole) (Boron fluoride)

VOLKOV, R.N.; ZAVGORODNIY, S.V.

Laws governing the autoxidation of polyalkylbenzenes. Liquid phase autoxidation of isopropyl-o-xylenes. Zhur.ob.khim. 31 no.8:2629-2635 Ag '61. (MIRA 14:8)

1. Voronezhskiy gosudarstvennyy universitet.
(Xylene) (Oxidation)

VOLKOV, R.N.; ZAVGORODNIY, S.V.

Mechanism of lactone formation in the course of the liquid-phase autoxidation of certain polyalkylbenzenes. Zhur.ob.khim. 31 no.9:3090-3099 S '61. (MIRA 14:9)
(Benzene) (Lactones)

ZAVGORODNIY, S.V.; ALISOVA, E.V.

Arylalkylation of anisole with st rene and α-methylstyrene in the presence of BF_3. H_3PO_4 and $BF_3.O(C_2H_5)2$. Dokl. AN SSSR 139 no.6:1367-1370 Ag '61. (MIRA 14:8)

1. Kiyevskiy politekhnicheskiy institut. Predstavleno akademikom A.V. Topchiyevym.
(Anisole) (Styrene)

S/064/62/000/003/004/007
B110/B101

AUTHORS: Zavgorodniy, S. V., Novikov, I. N., Kryuchkova, V. G., Shatalov, V. P.

TITLE: Production of hydroperoxides of alkyl aromatic hydrocarbons. Their initiating properties in copolymerization of divinyl with styrene.

PERIODICAL: Khimicheskaya promyshlennost', no. 3, 1962, 29 - 35

TEXT: The synthesis of hydroperoxides of cyclohexylbenzene (I); p-isopropyl-sec-butylbenzene (II); p-isopropylcyclohexylbenzene (III); p-di-sec-butylbenzene (IV); p-diisopropyl-2-chloro benzene (V) and 1,3,5-triisopropylbenzene (VI) by autoxidation with atmospheric oxygen was studied, as well as their capacity for initiating copolymerization of divinyl with styrene at low temperatures. Oxidation took place in the presence of manganese resinate and alkali: NaOH, $Ca(OH)_2$, Na_2CO_3, K_2CO_3 at 95 - 120°C. It was found that VI is oxidized the most strongly, II and III are oxidized well, but I, especially in the presence of BaO_2, is oxidized only slowly. Increasing the reaction temperature from 110 to 120°C (5 - 6

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Production of hydroperoxides...

mg/mole of manganese resinate, 1 - 3 g/mole of soda) caused faster autoxidation and raised the maximum hydroperoxide concentration of IV; it influenced the oxidation of II and VI and reduced the hydroperoxide concentration of I. In the autoxidation of I (at 95, 110, and 120°C) the addition of manganese resinate and soda produced an optimum effect. In the autoxidation of III it is chiefly mono hydroperoxides of α,α-dimethyl-p-cyclohexylbenzyl that arise. II readily forms a mixture of two mono and one dihydroperoxide

X

ALISOVA, E.V.; ZAVGORODNIY, S.V.

Arylalkylation of phenetole with styrene and α-methylstyrene in the presence of $BF_3.H_3PO_4$ and $BF_3.O(C_2H_5)_2$. Zhur. ob. khim. 34 no.9:3079-3081 S '64. (MIRA 17:11)

KHARCHENKO, L.S.; ZAVGORODNIY, S.V.

Alkylation of cresols with butylenes. Ukr. khim. zhur. 30 no.3:261-262 '64. (MIRA 17:10)

1. Kiyevskiy politekhnicheskiy institut i Institut organicheskoy khimii AN UkrSSR.

ZAVGORODNIY, V.K.

Apparatus for semiautomatic control of a hydraulic press. Khim. prom. no.6:338-346 S '56. (MLRA 10:2)

1. Karacharovskiy zavod plastmass.
(Hydraulic presses) (Automatic control)

ZAVGORODNIY, V.K.

Arrangement for the elimination of hydraulic shock in a press with self-contained hydraulic drive. Khim.prom. no.4:241-242 Je '57. (MLRA 10:9)

(Hydraulic presses)

SOV/123-59-16-68072

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 16, p 571 (USSR)

AUTHOR: Zavgorodniy, V.K.

TITLE: Modernization of Rotary Pelleting Presses

PERIODICAL: Vestn. tekhn. i ekon. inform. Mezhotrasl. labor. tekhn.-ekon. issled. i nauchno-tekhn. inform. N.-i. fiz.-khim. in-ta im. L.Ya. Karpova, 1958, Nr 1 (6), 9 - 21

ABSTRACT: When the rotary pelleting TM-2 machine for the pelleting of phenol-aldehyde plastics, amino plastics, pharmaceutical materials and others was modernized the gear box was removed which permitted to reduce the overall dimensions, the weight and the noise of the machine in operation. A central lubrication system, and some alterations in the design of the receiving container and feed bin were suggested, which allowed to put the powder, pouring out from the feed bin, nearer to the rotor. The units of the auxiliary master forms were improved as well as those for pelleting and ejection by changing the profile of the pressure wedge; by lengthening the supporting master form, etc. As a result the service life of the machine parts and mechanisms was in-

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Modernization of Rotary Pelleting Presses

SOV/123-59-16-68072

creased. In order to avoid a destruction of the tablets when being pushed out, the face of the puncher was chamfered at an angle of 45° and 1.2 - 1.5 mm in depth, or its surface was given a spherical shape. The machine is protected from overloads and breakdowns by an additional relay of the maximum current and a friction coupling. The MT-2A machine was modernized in an analogous way. It is also stated that the rotary pelleting machine with two-sided pelleting was modernized. They are fitted with devices which facilitate the filling of the dies and warrant the accuracy to weight of the tablets. 1 photo, 14 schemes.

S.R.N.

Card 2/2

AUTHOR: Frolova, P.V., Rombro, S.Ya. & Zavgorodn[illegible], V.K. 94-2-9/27

TITLE: Measures to economise electric power in a plastics press shop. (Meropriyatiya po ekonomii elektroenergii v pressovom tsekhe po proizvodstvu izdeliy iz plastmassy.)

PERIODICAL: Promyshlennaya Energetika, 1958, Vol.13. No.2. pp.22. (USSR)

ABSTRACT: This brief note describes a suggestion of the authors' for which was awarded a fifth premium in the All-Union competition for economy of electric power. In the 'Plastmass' works at Karach..rovsk the authors saved about 500,000 kWh annually by the following economy measures: switching-off electric motors whilst the press platens are stationary in the upper position; thermal insulation of the sides of press tools with sheet asbestos; automatic control of compressed air pressure; and reducing the filament voltage of h.f. valve generators during periods of no-load.

AVAILABLE: Library of Congress.

1. Electric power-Economical use

Card 1/1

28(1) SOV/118-59-1-4/16

AUTHOR: Zavgorodniy, V.K. Engineer

TITLE: Mechanization and Automation of Pressed Plastic Articles (Mekhanizatsiya i avtomatizatsiya proizvodstva pressovannykh izdeliy iz plastmassy)

PERIODICAL: Mekhanizatsiya i Avtomatizatsiya Proizvodstva, 1959, Nr 1, pp 18-24 (USSR)

ABSTRACT: The article stresses the importance of automation and mechanization in plastics production in fulfilling Seven-Year Plant requirements. These aim at boosting plastics production to 6.7 times that of current output. The article explains certain measures taken by some Soviet and foreign plants to increase automation and mechanization of work processes and describes some of the introduced equipment. Such units as the Karacharovskiy plant, plant imeni "Komsomol'skaya Pravda", "Karbolit" plant in Orekhovo-Zuyevo and

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Mechanization and Automation of Pressed Plastic Articles

"Karbolit" plant in Kemerovo increased production mainly by using high-frequency generators for preliminary heating of materials to be pressed, and by introducing semi-automatic control of hydraulic presses. The plant imeni "Komsomol'skaya Pravda" and the "Dinamo" plant also introduced multi-point remote-controlled heating of press forms. The "Tochelektropribor" plant in Kiyev and the plant ""Karbolit" in Orekhovo-Zuyevo have introduced induction heating of press forms on an industrial frequency current. The Karacharovskiy plant has designed and tested four-operation automats for producing component parts of electric counters. It is also operating highly-productive universal and special automats for machining products. Many plants have built up considerable power reserves normally used for driving hydraulic presses, by using low-pressure liquids (8 kg/cm^2) for forced lowering of

Mechanization and Automation of Pressed Plastic Articles

sliding plates. This process applied to 75 100-ton presses, saves 1,000,000 kw/h. per year. Similar rationalization should be introduced into such units as Podol'sk Accumulator plant, Tbilisi Plastics plant and the "Karbolit" plant in Orekhovo-Zuyevo. There are 3 photographs and 10 diagrams.

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ZAVGORODNIY, V.K.

5(3); 25(2) PHASE I BOOK EXPLOITATION SOV/2884

Moscow. Dom nauchno-tekhnicheskoy propagandy imeni F.E. Dzerzhinskogo

Plastmassy v mashinostroyenii (Plastics in Machine Building) Moscow, Mashgiz, 1959. 236 p. Errata slip inserted. 5,000 copies printed.

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR.

Ed. (Title page): V.K. Zavgorodniy; Ed. (Inside book): B.M. Botkin, Engineer; Ed. of Publishing House: G.M. Konovalov; Tech. Ed.: A. F. Uvarova; Managing Ed. for Literature on Machine Building and Instrument Making (Mashgiz): S.V. Pokrovskiy, Engineer.

PURPOSE: This collection of articles is intended for engineers and technicians in the machine-building industry.

COVERAGE: This collection reviews the progress made by the Soviet Union in the field of manufacturing new plastic materials and fabricating different plastic-material articles for use in the machine-building industry. Physicomechanical and dielectric properties of phenolite, decorrosite, fluoroplastics, epoxy resins, polyamides, laminated plastics, and fiberglass plastics are analyzed and their use in machine building described. Characteristics and composition of adhesives and bonding ager s are given and the technology of the pressing process described. Methods of coating with plastics as a protection against corrosion are explained, and metallization of plastics achieved by vacuum evaporation is reviewed, as well as equipment used for manufacturing and fabricating plastics and articles made of plastics. Mechanization of certain operations and automatic control of various processes are discussed. No personalities are mentioned. References accompany individual articles.

AVAILABLE: Library of Congress

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PHASE I BOOK EXPLOITATION SOV/5076

Zavgorodniy, Viktor Konstantinovich

Mekhanizatsiya i avtomatizatsiya pererabotki plasticheskikh mass (Mechanization and Automation in the Molding of Plastics) Moscow, Mashgiz, 1960. 338 p. 10,000 copies printed.

Reviewer: L. G. Zav'yalov, Engineer; Ed.: Ya. G. Alaverdov, Engineer; Tech. Ed.: B. I. Model'; Managing Ed. for Literature on Chemical and Textile Machine Building: V. I. Rybakova, Engineer.

PURPOSE: This book is intended for technical personnel of the machine and chemical industries, and for others concerned with the fabrication of articles from plastics.

COVERAGE: The author discusses the most important achievements in the mechanization, automation, and intensification of processes applied in the fabrication of articles from plastics. Characteristics and special features in the design of existing and prospective equipment for molding thermosetting and thermoplastic

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materials are discussed. The calculation of the parameters of this equipment is also considered. No personalities are mentioned. There are 189 references: 42 Soviet and 147 non-Soviet.

TABLE OF CONTENTS:

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S/118/60/000/010/006/008
A161/A026

AUTHOR: Zavgorodniy, V. K., Engineer

TITLE: Automation of the Plastics Pelletizing Process

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, 1960, No. 10, pp.27-31

TEXT: A general review is made of the existing pelletizing machine designs, and the design and operation of some machines is described in detail. Rotary pelletizing machines are being produced in the USSR by the plants "Metallist" in Leningrad, "Vpered" in Taganrog, and some more others not identified. The rotary MT-3 (MT-3) (Fig. 1) is designed for producing 35 mm diameter pellets from powdered phenol plastics and 30 mm from amino plastics, at an hourly rate of 8,730 pellets when pressing phenol plastic. The machine has a 7 kw motor, 1,450 x 1,625 x 1,810 mm outer dimensions and 3,700 kg weight. The output is comparatively low, which is due to the low speed of the rotor, and the size of the machine is large because of the dimensions of its 30 punches that must be oriented in a definite position, but the weight of pellets is accurate. An example of a different rotary machine type that is far more productive is illustrated by diagram (Fig. 3). This type is smaller in size, which is due to the simple shape of the punches with the shaping

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end diameter nearly equal to the diameter of the section moving in the rotor. More punches can be used than in the machine type described first, and therefore these machines are more frequently used for multi-position work when the pellet diameter is not large (not over 40 mm). Fig. 3 illustrates such a machine with one working position only, with punches in the top part of the rotor, and punches and dies in the bottom part. This machine type has a drawback - the weight of pellets is not accurate, and they are not well suited for amino-plastics or polyvinyl chloride and fibrous material. The advantages of hydraulic pelletizing machines are stressed. They are horizontal, a new loading method can be employed, there are not so many moving machine parts; pellets of considerable height can be produced, and the output of multi-punch hydraulic machines is not lower than that of some rotary ones, while the pellet quality is better. They are particularly good for plastics with fibrous fillers that were formerly produced in hydraulic presses at a rate of 60-70 pellet batches per hour. A rough-pressing device is installed in the machine hopper for pelleting phenol plastics with high impact resistance. It compresses loose material to one third of its volume before it gets into the machine die. The work is controlled with a multiposition time relay with smooth regulation. Using the rough-presser, 700 of 450-g pellets may be produced hourly. The rough-presser is linked with a checking device, and the machine automatically stops when the

volume of material loaded into the hopper or the pellet weight is wrong. The machine operation is shown in a diagram set (Fig. 4). Material is loaded into a stationary hopper (1) from where it drops into a mobile hopper feeder (2). In first position (Fig. 4, a) it comes between a mobile punch (3) and a fixed punch (4) in the bottom portion of the hopper feeder. The die (5) may have one or several seats. A screw (6) is used for setting the travel limit and by it the pellet weight, without stopping the machine. In the next position (Fig. 4, b) the die (5) has moved left, and measured material in, remaining between the punches (3 and 4). The die is moved(together with the feeder) by two auxiliary hydraulic cylinders (7), pistons (8) and a plate (9). Further, (Fig. 4, c) the material is compressed into a pellet by the punch (3) moving left under pressure of the main hydraulic cylinder (10). The punches (3 and 4) are made hollow if pellets have to be in the form of rings. Inside the punches there is a rod (11) that is connected to a mobile plate (9) by a cross piece (12) and tie rods (13). The mobile punch moves on into the right position (Fig. 4, d), and the pellet is relieved from excess stress and separates from the punch. The feeder, die and rod move left, and the pellet (14) drops into a collecting box. No pusher is needed. The pellet weight varies not more than 2%. The hydraulic-type machines are recommended for use in all special plants producing plastics, particularly for making large pellets from high-dispersed materials and materials with fibrous fillers. There are 4 figures.

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A161/A026

Automation of the Plastics Pelletizing Process

Figure 1:

Rotary pelletizing machine MT-3.
1 - frame; 2 - worm drive; 3 - spur gear reducer; 4 - friction clutch; 5 - mounting plate bearing all major components: 6 - rotor, 7 - columns, 8 - top plate, 9 - feed hopper with stirrer (10), 11 - center shaft; 12 - stirrer drive pinion; 13 and 14 - punches (there are fifteen top and fifteen bottom punches); 15 - dies; 16 - butt rollers and 17 - side rollers for vertical

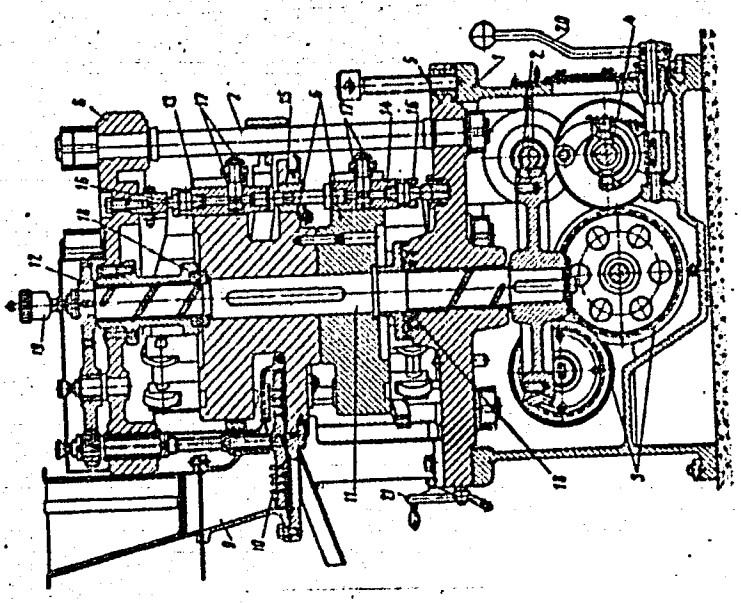

Рис. 1. Ротационная таблеточная машина МТ-3.

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Automation of the Plastics Pelletizing Process

Figure 1 continued: displacement of the punches and fixing in rotor seats; 18 - bearings; 19 - gravity lubricator for the bearings; 20 - clutch lever; 21 - hand wheel for regulating the ... pellet weight.

Figure 3:
Unfolded diagram of 2nd rotary machine type.
1 - rotor; 2 - top punches; 3 - bottom punches; 4 - tracer for guiding bottom punch head and final filling of the die with material; 5 - intermediate tracers for preliminary approaching of punches; 6 and 7 - rollers acting on the punch heads for compression of material into pellets; 8 - spring; 9-tracer guiding the bottom punch heads to push out pellets; 10 - sector distributer for loading dies from the hopper; 11.- regulator for setting the

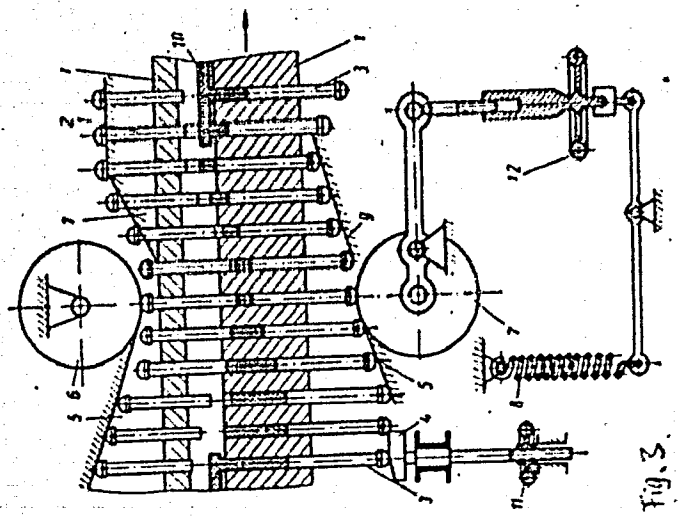

Fig. 3

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A161/A026

Figure 3 continued: weight of pellets; 12 - regulator for setting working pressure.

Figure 4:

Operation of a hydraulic machine.
a) - initial position; b) - loading material into a die; c) compression of material into a pellet; d) - pushing out a finished pellet.

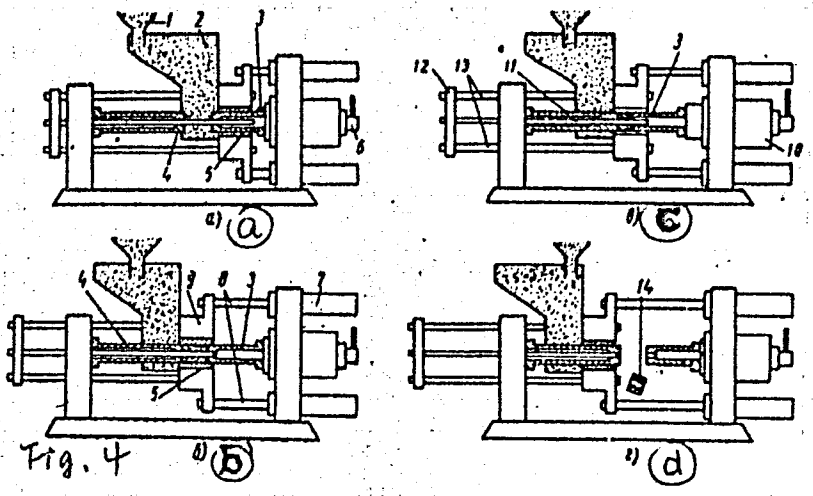

Fig. 4

Card 6/6

ZAVGORODNIY, V.K.

Equipment for plastics shops (to be concluded). Mashinostroitel' no.7:8-12 '61. (MIRA 14:7)
(Plastics industry) (Automation)

ZAVGORODNIY, V.K.

Equipment for plastics-working shops. Mashinostroitel' no.8:30-34 Ag '61. (MIRA 14:7)

(Plastics industry--Equipment and supplies)

ZAVGORODNIY, V.K.; OLENEV, B.A., inzh., retsenzent; KUBAREV, V.I., red.; TAIROVA, A.L., red.izd-va; SMIRNOVA, G.V., tekhn. red.

[Modernization of equipment for the manufacture of plastic articles] Modernizatsiia oborudovaniia dlia izgotovleniia izdelii iz plastmass. Moskva, Mashgiz, 1963. 202 p. (MIRA 16:8)

(Plastics machinery)

ZAVGORODNIY, V.K., inzh.

Automatic rotary presses and transfer-machine lines. Mekh.i avtom.proizv. 18 no.2:6-11 F '64. (MIRA 17:4)

RYABININ, D.D.; LUKACH, Yu.Ye.; ZAVGORODNIY, V.K., inzh., retsenzent; KARGANOV, V.G., inzh., red.

[Screw extruders for processing plastics and rubber mixes] Cherviachnye mashiny dlia pererabotki plastichesskikh mass i rezinovykh smesei. Moskva, Mashinostroenie, 1965. 362 p. (MIRA 18:3)

ZAVGORODNIY, V.P.; KOSHKAREV, A.P.; SHLYAKHOVOY, V.O., red.; LYSIK, O.I., tekhred.

[Our sunny region; economy and culture of Kherson Province during the years of the Soviet regime] Nash solnechnyi krai; ekonomika i kul'tura Khersonshchiny za gody Sovetskoi vlasti. Kherson, Khersonskoe knizhno-gazetnoe izd-vo, 1960. 123 p. (MIRA 13:11)

(Kherson Province--Economic conditions)

ZAVGORODNIY, V. S.

5(0) AUTHORS: Mashovets, V. P., Ponomareva, A. M. SOV/153-2-2-31/31

TITLE: Chronicle. All-Union Competition for the Best Students-paper Concerning Chemistry and Chemical Technology for the Scholastic Year 1957-1958 (Khronika. Vsesoyuznyy konkurs na luchshuyu studencheskuyu rabotu po khimii i khimicheskoy tekhnologii za 1957-1958 uchebnyy god)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 2, pp 303-304 (USSR)

ABSTRACT: The Ministerstvo vysshego obrazovaniya SSSR (Ministry for University-education of the USSR) carried out the competition mentioned in the title, within the framework of the Studencheskiye nauchnyye obshchestva (Scientific Student Societies) covering 37 subjects of science, technology, arts, and culture. The Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet) was entrusted with the subject "Chemistry and Chemical Technology". A commission was formed consisting of Professor V. B. Aleskovskiy, V. P. Mashovets (Chairman), I. P. Mukhlenov, A. A. Petrov, B. A. Poray-Koshits, Docent P. A. Yablonskiy, and Candidate of Chemical Sciences

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Chronicle. All-Union Competition for the Best Students-paper Concerning Chemistry and Chemical Technology for the Scholastic Year 1957-1958

SOV/153-2-2-31/31

A. M. Ponomareva (Secretary). The following persons acted as critics: The Professors A. F. Alabyshev, A. M. Ginstling, I. S. Ioffe, M. I. Knyaginichev, L. Ya. Kremnev, A. B. Kusov, A. M. Malkov, I. N. Maslenitskiy, K. P. Mishchenko, Yu. V. Morachevskiy, with the collaborators, N. N. Nepenin, Yu. K. Novodranov, V. V. Perekalin, A. L. Rotinyan, A. V. Satalkin, A. V. Storonkin, and T. A. Favorskaya with collaborators, A. M. Khaletskiy; Docents: A. Ye. Akim, L. M. Batuner, M. I. Gil'dengershel', O. F. Ginsburg, I. A. D'yakonov, S. G. Zhavoronok, S. N. Zhilov, Ye. S. Roskin, P. N. Sokolov, N. P. Starostenko, M. M. Sychev, A. T, Troshchenko; Chief scientific researcher : B. F. Ioffe; Candidates of Sciences: G. A. Bel'chenko, M. K. Bynyayeva, O. N. Setkina, B. P. Yur'yev; Engineers: Kostyreva, Senyusheva, and Yarmolinskiy. The paper "Synthesis and Self-oxidation of the p-Di-Secondary Butyl-benzene" by V. S. Zavgorodniy, Fifth-year student of the Voronezhskiy gosudarstvennyy universitet (Voronezh State University) was awarded a medal for being the best. The second candidate for the medal is the

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Chronicle. All-Union Competition for the Best Students-paper Concerning Chemistry and Chemical Technology for the Scholastic Year 1957-1958 SOV/153-2-2-31/31

Fifth-year-student of the Kiyevskiy gosudarstvennyy universitet (Kiyev State University) K. F. Lyashev. He submitted the paper "Kinetics of the Non-stationary Catalytic Decomposition-process of Hydrogen-peroxide on Platinum". The third medal was awarded to the Fourth-year-students of the Ivanovskiy khimiko-tekhnologicheskiy institut (Ivanovo Chemical-technological Institute): D. V. Nebova, A. I. Sotnikova, T. T. Simagina, and R. M. Sutyagina for the paper: "Method of Continuous Regeneration of Zinc-chloride From Waste Water of the Kineshma Fibre Factory". Besides these three papers, the commission selected further 8 papers which deserve publication owing to their maturity and originality. The papers are: "Utilization of Phosphorous Gypsum for the Production of Local Construction-binding Materials" by the Fourth-year-students of the Ivanovo Institute (see above): A. V. Tochilova and A. A. Fadeyeva; "Study of the Influence of the Dispersion of Polymer Particles, When Being Disintegrated, on the Molecular Weight" by the Third-year-student of the Moskovskiy

Card 3/5

Chronicle. All-Union Competition for the Best Students-paper Concerning Chemistry and Chemical Technology for the Scholastic Year 1957-1958 SOV/153-2-2-31/31

tekhnologicheskiy institut legkoy promyshlennosti (Moscow Technological Institute for Light Industry) V. N. Gorodilov; "Study of the Cathodical Polarization at the Precipitation of Chromium From Sulphide-solutions" by the Fifth-year-student of the Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute) V. G. Petropavlovskiy; "Gold Extraction From Watery Cyanide-solutions" by the Fifth-year students of the Moskovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva (Moscow Chemical-technological Institute imeni D. I. Mendeleyev) A. V. Ochkin, V. A. Borisov, and M. Mrnk; "Some Investigations of the Vulcanisates of Rubbers Containing Carboxyl" by the Fourth-year-students of the Yaroslavskiy tekhnologicheskiy institut (Yaroslavl' Technological Institute) G. I. Komarova and T. A. Shchadricheva; "Investigation of the Cathodic and Anodic Processes at Gold-plating" by the Fifth-year-student of the Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet) R. A. Nosova; "Spectral Determination of Molybdenum and Tungsten in Tri-hetero-polyacids"

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Chronicle. All-Union Competition for the Best Students-paper Concerning Chemistry and Chemical Technology for the Scholastic Year 1957-1958 SOV/153-2-2-31/31

by the Third-year-student of the Kishinevskiy gosudarstvennyy universitet (Kishinev State University) V. A. Dagayev; "Capture of Dichlorine-ethane by Bone-fat in Foam-condition" by the Fourth-year-students of the Kazanskiy khimiko-tekhnologicheskiy institut (Kazan' Chemical-technological Institute) L. I. Yashina, R. A. Nurutdinov, and T. G. Siraznev. Taken collectively, the competition has shown a high standard of the scientific research work in the circles of the Studencheskoye Nauchnoye obshchestvo (Scientific-student.-societion) of many universities.

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S/153/60/003/006/004/009
B103/B206

AUTHOR: Zavgorodniy, V. S.

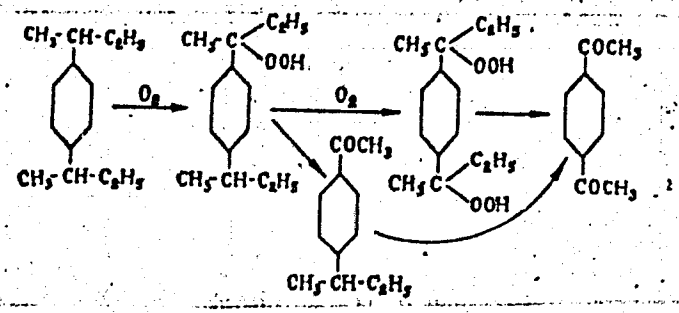
TITLE: Liquid phase autoxidation of p-di-sec-butyl benzene

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, v. 3, no. 6, 1960, 1045-1052

TEXT: The author reports on the autoxidation of p-di-sec-butyl benzene (I) in liquid phase with atmospheric oxygen in the presence of the following materials: manganese resinate and calcium hydroxide, soda, caustic soda, cobalt acetate in various combinations. It was the purpose of this study to show the way for a rational utilization of (I), which accumulates as by-product from the production of secondary butyl benzene. On the basis of the results obtained, the author assumes that the oxidation of (I) proceeds step-by-step: monohydrogen peroxide forms first, until it has reached a certain concentration. From this moment the attack of oxygen is directed against the tertiary α-carbon atom of the second butyl radical, dihydrogen peroxide being formed. Further oxidation leads to maximum concentration of

Liquid phase autoxidation of...

the latter, whereafter this concentration decreases gradually. At a longer passage of air the hydrogen peroxide is finally completely split up to ketones.



Before reaching the maximum concentration of hydrogen peroxide, a mixture of mono- and dihydrogen peroxides is contained in the solution. With 98% H_2SO_4 they can be split up into p-di-sec-butyl phenol, hydroquinone and methyl-ethyl ketone. The author established that a mixture of mono- and

Liquid phase autoxidation of...

dihydrogen peroxide of the (I) or of mono- and diacetyl benzenes, respectively, can be obtained according to the duration of the oxidation process, flow rate of the air, degree of purity of (I), temperature (between 95 and 120°C) as well as the nature and type of combination of the alkaline admixtures. Both hydrogen peroxides can be split up into p-sec-butyl acetophenone and p-diacetyl benzene by means of a 1 N solution of $FeSO_4$.

By means of 30% NAOH solution, the hydrogen peroxide was reduced to p-sec-butyl-phenyl methyl ethyl carbinol and p-(α,α'-sec-butyldioxide)-benzene. The author achieved an almost quantitative oxidation of (I) to p-sec-butyl acetophenone (yield 39%) and p-diacetyl benzene (yield 57%) by allowing air to pass for 102 hr through (I) in the presence of manganese resinate, sodium stearate, calcium hydroxide and cobalt acetate. The formula by R. N. Volkov (Ref. 10) was used for calculating the content of mono- and dihydrogen peroxide. The author thanks I. F. Bayev, Engineer, for his support. Table 1 shows the experimental conditions and results of autoxidation of (I). There are 4 figures, 2 tables, and 10 references: 3 Soviet-bloc and 6 non-Soviet-bloc.

S/153/60/003/006/004/009
B103/B206

Liquid phase autoxidation of...

ASSOCIATION: Voronezhskiy gosudarstvennyy universitet; Kafedra organicheskoy khimii (Voronezh State University; Department of Organic Chemistry)

SUBMITTED: May 11, 1959

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S/153/60/003/006/004/009
B103/B206

Liquid phase autoxidations of...

Legend to Table 1:
1) No. of experiment,
2) amount of I, g,
3) manganese resinate, mg, 4)-5) additives,
4) empiric formula,
5) amount, mg
6) reaction mass obtained, g,
7) maximum concentration of hydrogen peroxide in the solution, %
8) duration of the oxidation process, h.

Таблица 1

Автоокисление *п*-дивторичнобутилбензола

№№ опытов	Взято для автоокисления: дивторичнобутилбензола, г	резината марганца, мг	добавок: формула	мг	Получено реакционной массы, г	Максимальная концентрация гидроперекиси в растворе, %	Время окисления, часы
1	95,2	6,0	—	—	97,8	54,7	20
2	38,6	0,6	—	—	40,9	54,1	17
3	49,2	3,0	Na_2CO_3	125	51,4	54,6	17
4	48,2	0,25	$Co(OOCCH_3)_2$	37	49,6	54,0	18
5	96,5	3,0	$Ca(OH)_2$	200	100,6	57,2	28
6	47,7	1,5	Na_2CO_3	250	49,3	58,0	20
7	36,0	1,2	Na_2CO_3	200	40,9	54,0	15
8	95,2	3,0	Na_2CO_3	500	100,0	51,1	20
9	70,8	2,2	$Ca(OH)_2$	147	70,3	53,2	43
10	38,1	1,2	Na_2CO_3	200	42,5	62,5	12
11	38,0	1,2	$Ca(OH)_2$	200	42,3	67,4	14
12	70,0	2,5	$Ca(OH)_2$	148	64,5	43,3	17
13	85,0	2,7	$Ca(OH)_2$	180	79,0	39,3	25
14	48,2	3,0	Na_2CO_3	125	50,7	54,4	17
	1	2	3	4	5	6	7	8

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ZAVGORODNIY, V.S.; PETROV, A.A.

Methyl- and vinylacetylenylboric esters. Zhur.ob.khim. 31 no.7: 2433-2434 Jl '61. (MIRA 14:7)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Boron organic compounds) (Boric acid)

S/051/62/012/002/005/020
E202/E192

AUTHORS: Yakovleva, T.V., Petrov, A.A., and Zavgorodniy, V.S.

TITLE: Vibrational spectra and structure of enine tin-hydrocarbons

PERIODICAL: Optika i spektroskopiya, v.12, no.2, 1962, 200-203

TEXT: Raman and infra red spectra of trimethyl (vinylethynyl) tin, triethyl (vinylethynyl) tin and triethyl (isopropenylethynyl) tin, were studied in order to find the effect of the increased atomic weight of the heteroatom. All the characteristic groups and bonds were identified in terms of their frequencies. On the basis of the present and earlier work in which similar enine silicon hydrocarbons were studied (Ref.1: T.V. Yakovleva, A.A. Petrov, Opt. i spektr. v.11, 594, 1961. Ref.2: T.V. Yakovleva, A.A. Petrov, M.D. Stadnichuk, Opt. i spektr. v.11, 588, 1961) it was concluded that by exchanging the C- atom with Si, and Sn, in turn, the triple bond frequency of the tin-hydrocarbons is reduced by 20 cm^{-1} in comparison with silicon hydrocarbons, and by 90 cm^{-1} when

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compared with the pure hydrocarbons. The frequency of the double bond was also slightly lowered. On the other hand the intensity of the triple bond was increased which was due to the change in polarity, coefficient of bond elasticity and the stretching of the electron cloud of this bond. It was thought that some electrons of the triple bond may be partially occupying the unfilled levels of tin atom. No experimental details were given as these were the same as in the previous papers. The measurement of dipole moments was carried out by K.S. Mingaleva.

There are 2 figures and 3 tables.

SUBMITTED: January 24, 1961

S/020/62/143/004/017/027
B106/B138

1.3700
11.1340

AUTHORS: Zavgorodniy, V. S., and Petrov, A. A.

TITLE: Tin and lead hydrocarbons containing 1,3-enin radicals

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 4, 1962, 855-858

TEXT: This is the first time these hydrocarbons have been synthesized. They form in good yields (70-85%) on reaction of trialkyl tin sodium or trialkyl lead sodium with alkenyl bromo-acetylene according to:

$R_3Me\text{-}Na + Br\text{-}C{\equiv}C\text{-}CR'{=}CH\text{-}R'' \longrightarrow R_3Me\text{-}C{\equiv}C\text{-}CR'{=}CH\text{-}R'' + NaBr$, (Me = Sn, Pb; R = CH_3, C_2H_5; R' and R" = H, CH_3). The reaction is also of note since the halogen alkines mentioned do not usually exchange their halogen for negatively polarized radicals. Reaction conditions: A 25% sodium excess was gradually added over 1 hr to a suspension of triethyl tin chloride or triethyl lead bromide in anhydrous liquid ammonia. To the resulting solution of triethyl tin sodium or triethyl lead sodium a 25% excess of the corresponding alkenyl bromo-acetylene was added drop by drop with thorough mixing. The reaction was at first violent. After 1 hr stirring,

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Tin and lead hydrocarbons containing ...

ether was added. On the following day the pulpy mass was heated in a water bath to remove the ammonia, and then centrifuged. The liquid part was distilled in vacuo. All operations were carried out in nitrogen atmosphere. The tin and lead hydrocarbons synthesized (Table 1) are colorless liquids of unpleasant odor. In pure form and with exclusion of air, they are stable for a long time; but in air they hydrolyze quickly. The lead compounds explode on overheating. On passing from analogously built hydrocarbons to silicon, tin, and lead compounds, the absorption band of the C≡C bond in the infrared spectrum shifts steadily toward lower frequencies ($\nu_{C\equiv C}$ for hydrocarbons 2210 cm^{-1}, for Si hydrocarbons 2150 cm^{-1}, for Sn hydrocarbons 2127 cm^{-1}, for Pb hydrocarbons 2110 cm^{-1}), due not only to increased atomic weights in the carbon → lead series, but also to changes in the nature of the bond between the acetyl carbon and the heteroatom. The bands of the ethylene bonds do not shift. The nuclear magnetic resonance spectra of the tin and lead hydrocarbons differ from those of the analogously built Si hydrocarbons in the lower τ-values for the alkyl radicals bound to heteroatoms. Experimental additions to the enin system of the compounds synthesized failed. The metal - carbon bond was split under the action of halogens, lithium alkyls, or lithium

aluminum hydride. Nor was catalytic hydrogenation possible, due apparently to poisoning of the catalyst. There are 2 figures and 1 table. The three English-language references are: R. K. Ingham, S. D. Rosenberg, H. Gilman, Chem. Rews, 60, 459 (1960); H. Gilman, J. C. Bailie, J. Am. Chem. Soc., 61, 731 (1939); R. A. Jacobson, W. H. Carothers, J. Am. Chem. Soc., 55, 4667 (1933).

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet)

PRESENTED: November 13, 1961, by A. N. Nesmeyanov, Academician

SUBMITTED: October 27, 1961

Table 1. Constants of enin tin and lead hydrocarbons. Legend: (1) Substance, (2) boiling point, °C, (3) pressure, mm, (4) exp., (5) calculated.

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11,1750
15.8150

36086
S/079/62/032/004/007/010
D287/D301

AUTHOR: Petrov, A.A., Zavgorodniy, V.S., and Kormer, V.A.

TITLE: Dialkylboron and dialkylaluminum vinylacetylene

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 4, 1962, 1349-1350

TEXT: The present work is a continuation of earlier investigations by the authors on the character of bonds with acetylene and vinylacetylene groups and on the position of these bonds. Dibutylboron iso-propenylacetylene, prepared in a current of nitrogen in ether, had after high-vacuum distillation a boiling point of 22 - 25°C at 0.1 mm pressure, $n_d^{20} = 1.4509$; the substance was instantaneously inflammable on air. The 2145 cm^{-1} band in the IR spectrum was assigned to treble bond substances, the 1609 cm^{-1} band to double bond substances, the 900 cm^{-1} band to the deformation vibrations of the iso-propenyl group. The boron atom, therefore, lowers the frequency of the valency vibrations of the treble bond to the same extent as the Si atom, but has only a negligible effect on the frequency of the double bond valency vibrations. The dialkylaluminum vinylacetylenes

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S/079/62/032/004/007/010
D287/D301

Dialkylboron and dialkylaluminum ...

were synthesized in an argon current. Both compounds were oils, subject to spontaneous combustion on air, with a characteristic 2075 cm^{-1} IR absorption band. The compounds polymerize during storage or heating, forming allene adducts by 1,4-addition; their characteristic IR absorption band is at ~1920 cm^{-1}. Tri-iso-butyl aluminum and di-iso-butyl aluminum hydride also form alkyl aluminum vinyl acetylenes with vinyl acetylene, as well as treble bond adducts. Strong characteristic bands appear at 1530 and 2070 cm^{-1} in the IR spectrum. Frequency of the multiple bonds is shifted towards the usual values when the dialkyl compounds are treated with absolute ether; this also causes a sharp decrease in the intensity of the bands. There are 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Institute for Technology im. Lensoviet)

SUBMITTED: April 15, 1962

Card 2/2

S/079/62/032/011/004/012
D204/D307

AUTHORS: Zavgorodniy, V.S., and Petrov, A.A.

TITLE: Investigations of conjugated systems. CLXIII. Synthesis and properties of 1,3-enyne tin-containing hydrocarbons

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 11, 1962, 3527 - 3532

TEXT: The formation of compounds $R_3Sn-C \equiv C-CR' = CHR''$ (where R is Me or Et, and R', R'' are H or Me) was studied by the action of (1) trialkylchlorostannanes on Mg bromovinylacetylene (Iotsich reagents) (2) trialkylchlorostannanes on sodium vinylacetytide, and (3) alkenyl bromoacetylenes on sodium trialkyltin, in liquid ammonia. The highest (up to 85 %) yields were obtained with method (3). Six compounds were prepared: trimethyl vinylacetylenyl, - triethyl vinylacetylenyl - trimethylpropenylacetylenyl, - triethyl propenylacetylenyl, - trimethyl iso-propenylacetylenyl, - and triethyl iso-propenylacetylenyl - stannanes. The above were colorless liquids with a specific odor, b.p.'s ranging from 46.5 to 105°C at 10 mm Hg, hydro-

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lyzing fairly readily in air and polymerizing in presence of trialkylchlorostannanes to dark, solid products. The compounds could not be hydrogenated over $Pd/CaCO_3$, but reacted with $LiAlH_4$, LiBu and Br_2 to give respectively trialkylstannane, trialkylbutylstannane, and trialkylbromostannane. Fission of the Sn-C bond occurred in every case and no addition to the triple bond was observed. There is 1 figure and 1 table.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institut imeni Lensovet)

SUBMITTED: October 27, 1961

YAKOVLEVA, T.V.; PETROV, A.A.; ZAVGORODNIY, V.S.

Structure and vibrational spectra of enin tin hydrocarbons.
Opt. i spektr. 12 no.2:200-203 F '62. (MIRA 15:2)
(Tin organic compounds--Spectra)

ZAVGORODNIY, V.S.; PETROV, A.A.

Addition of triphenyl radicals to 1,3-enyne tin hydrocarbons. Dokl. AN SSSR 149 no.4:846-849 Ap '63. (MIRA 16:3)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta. Predstavleno akademikom B.A.Arbuzovym.
(Trityl group) (Hydrocarbons) (Tin organic compounds)

ZAVGORODNIY, V.S.; PETROV, A.A.

Preparation of acetylenic tin hydrocarbons by the direct substitution of a tin-containing group for acetylenic hydrogen. Zhur. ob. khim. 33 no.8:2791 Ag '63. (MIRA 16:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

PETROV, A.A.; MINGALEVA, K.S.; ZAVGORODNIY, V.S.

Chemistry of unsaturated tin hydrocarbons. Part 4: Diple moments of alkyl-, alkenyl-, and phenylacetylenic tin hydrocarbons. Zhur.ob.khim. 34 no.2:533-535 F '64. (MIRA 17:3)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

NAVGORODNIY, V. S.; PETROV, A. A.

Unsaturated tin hydrocarbons. Part 5: Addition of diazomethane to 1,3-enyne tin hydrocarbons. Zhur. ob. Khim. 34 no.6:1931-1936 Je '64. (MIRA 17:7)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

PETROV, A.A.; ZAVGORODNIY, V.S.

Addition of some sodium acetylide to diethyltin. Synthesis of acetylenic tin hydrocarbons. Zhur. ob. khim. 34 no.8:2806 Ag '64. (MIRA 17:9)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

ZAVGORODNIY, V.S.; PETROV, A.A.

Trialkyltin diacetylenes. Zhur. ob. khim. 35 no.4:760 Ap '65.
(MIRA 18:5)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

PETROV, A.A.; YELSAKOV, N.V.; ZAVGORODNIY, V.S.; LEBEDEV, V.B.

Study of H-bonds formed by acetylene compounds by means of nuclear magnetic resonance spectroscopy. Part 7: Interaction with solvents of acetylenic, diacetylenic, and 1,3-enyne silicon hydrocarbons and tin hydrocarbons. Teoret. i eksper. khim. 1 no. 5:697-700 S-O '65 (MIRA 19:1)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta. Submitted January 25, 1965.

ZAVGORODNIY, V.S.; PETROV, A.A.

Reaction of sodium trialkyltin with bromoacetylene. Zhur. ob. khim. 35 no.5:931-932 My '65. (MIRA 18:6)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

ZAVGORODNIY, V.S.; PETROV, A.A.

Addition of triethyllead hydride to diacetylene hydrocarbons.
Zhur. ob. khim. 35 no.7:1313-1314 Jl '65. (MIRA 18:8)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.

ZAVGORODNYAYA, N.G.

Interdepartmental conference on the problem "Theoretical foundations of efficient utilization, reproduction, and increase of fish stocks and other resources of the White Sea and inland waters of Karelia." Vop. ikht. 1 no.2:372-374 '61. (MIRA 14:6)
(Karelia--Fisheries--Research) (White Sea--Fisheries--Research)

BILICHENKO, N. Ya., dotsent, kand.tekhn.nauk; VYSOCHIN, Ye. M., aspirant
ZAVGORODNIY, Ye. Kh., gornyy inzhener

Increasing the length of belt conveyers installed on inclines. (MIRA 14:4)
Vop. rud. transp. no.2:128-141 1957.

1. Dnepropetrovskiy gornyy institut.
(Conveying machinery)

BILICHENKO, N. Ya., kand.tekhn.nauk; VYSOCHIN, Ye. M., gornyy inzhener
ZAVGORODNYY, Ye. Kh., gornyy inzhener.

Increasing the length of inclined belt conveyers. Vop. rud. transp. no.3:68-81 1959. (MIRA 14:4)

1. Dnepropetrovskiy gornyy institut.
(Conveying machinery)

POLYAKOV, N.S., prof.; BILICHENKO, N.Ya., dotsent; VYSOCHIN, Ye.M., gornyy inzh.; ZAVGORODNIY, Ye.Kh., gornyy inzh.; LADYCHUK, N.I., gornyy inzh.; MATVEYEV, A.I., starshiy laborant

Flexible rollers for conveyer belts. Ugol' Ukr. 4 no.7:32-33 Jl '60. (MIRA 13:8)
(Conveying machinery) (Roller bearings)

BILICHENKO, N.Ya., kand.tekhn.nauk; VYSOCHIN, Ye.M., inzh.; ZAVGORODNIY, Ye.Kh., inzh.

Equipment for thorough testing of underground belt conveyors. Vop.rud. transp. no.4:126-146 '60. (MIRA 14:3)

1. Dnepropetrovskiy gornyy institut im. Artema.
(Conveying machinery)

BILICHENKO, N.Ya.; ZAVGORODNIY, Ye.Kh.; VYSOCHIN, Ye.M.

Measuring torques of driving shafts. Izm.tekh. no.1:23-24 Ja '60. (MIRA 13:5)
(Shafting) (Torque--Measurement)

POLYAKOV, N.S.; BILICHENKO, N.Ya., kand.tekhn.nauk, VYSOCHIN, Ye.M., inzh.; ZAVGORODNIY, Ye.Kh., inzh.; LADYCHUK, N.I., inzh.; MATVEYEV, A.I., starshiy laborant

Designing and industrial testing of flaxible supporting rollers of belt conveyors. Vop.rud. transp. no.4:159-175 '60. (MIRA 14:3)

1. Dnepropetrovskiy gornyy institut im. Artema. 2. Chlen-korrespondent AN USSR (for Polyakov).
(Conveying machinery--Equipment and supplies)

BILICHENKO, N.Ya., kand. tekhn. nauk; VYSOCHIN, Ye.M., inzh.;
ZAVGORODNIY, Ye.Kh., inzh.

Over-all studies of RTU-30 belt conveyors. Vop. rud. transp.
no.5:7-16 '61. (MIRA 16:7)

1. Dnepropetrovskiy gornyy institut.
(Conveying machinery)

ZAVGORODNIY, Ye.Kh., inzh.

Studies of the starting conditions of the operation of underground belt conveyors. Vop. rud. transp. no.5:17-20 '61. (MIRA 16:7)

1. Dnepropetrovskiy gornyy institut.
(Conveying machinery)

BILICHENKO, N.Ya.; ZAVGORODNIY, Ye.Kh.; VYSOCHIN, Ye.M.; KLIMOV, V.V.

High-duty electric ring dynamometers. Izm.tekh. no.1:21-23 Ja'62.
(MIRA 15:2)

(Dynamometer)

BILICHENKO, N.Ya., kand.tekhn.nauk; VYSOCHIN, Ye.M., inzh.; ZAVGORODNIY, Ye.Kh., inzh.

Operating conditions for rubberized conveyer belts. Vop. rud. transp. no.6:3-13 '62. (MIRA 15:8)

1. Dnepropetrovskiy gornyy institut.
(Conveying machinery)

BILICHENKO, N.Ya., kand.tekhn.nauk; ZAVGORODNIY, Ye.Kh., inzh.; VYSOCHIN, Ye.M., inzh.

Overall studies of the KLS-1200 belt conveyor. Vop. rud. transp. no.6:13-24 '62. (MIRA 15:8)

1. Dnepropetrovskiy gornyy institut.
(Conveying machinery)

ZAVGORODNIY, Ye.Kh., inzh.

Dynamic loads on conveyor belts with uneven movement of the conveyers. Vop. rud. transp. no.6:24-36 '62. (MIRA 15:8)

1. Dnepropetrovskiy gornyy institut.
(Conveying machinery)

ZAVGORODNIY, Ye.Kh., inzh.

Study of the dynamic modulus of elasticity of conveyor belts.
Vop. rud. transp. no.6:36-43 '62. (MIRA 15:8)

1. Dnepropetrovskiy gornyy institut.
(Conveying machinery)

BILICHENKO, N.Ya., dotsent; VYSOCHIN, Ye.M., kand.tekhn.nauk; ZAVGORODNIY, Ye.Kh.; GOTOVTSEV, Yu.A., inzh.

Some deficiencies in the operation of pulling stations for belt conveyors. Ugol' Ukr. 7 no.6:29-30 Je '63. (MIRA 16:8)

1. Dnepropetrovskiy gornyy institut.

BILICHENKO, N.Ya., kand.tekhn.nauk; VYSOCHIN, Ye.M., kand.tekhn.nauk; ZAVGORODNIY, Ye.Kh., kand.tekhn.nauk; GOTOVTSEV, Yu.A., inzh.

Comprehensive experimental studies of the KRU-350, KRU-260, and KRU-260A mine conveyors. Vop. rud. transp. no.7:17-45 '63. (MIRA 16:9)

1. Dnepropetrovskiy gornyy institut.
(Conveying machinery--Testing)

ZAVGORODNIY, Ye.Kh., kand.tekhn.nauk; BILICHENKO, N.Ya., kand.tekhn.nauk; VYSOCHIN, Ye.M., kand.tekhn.nauk

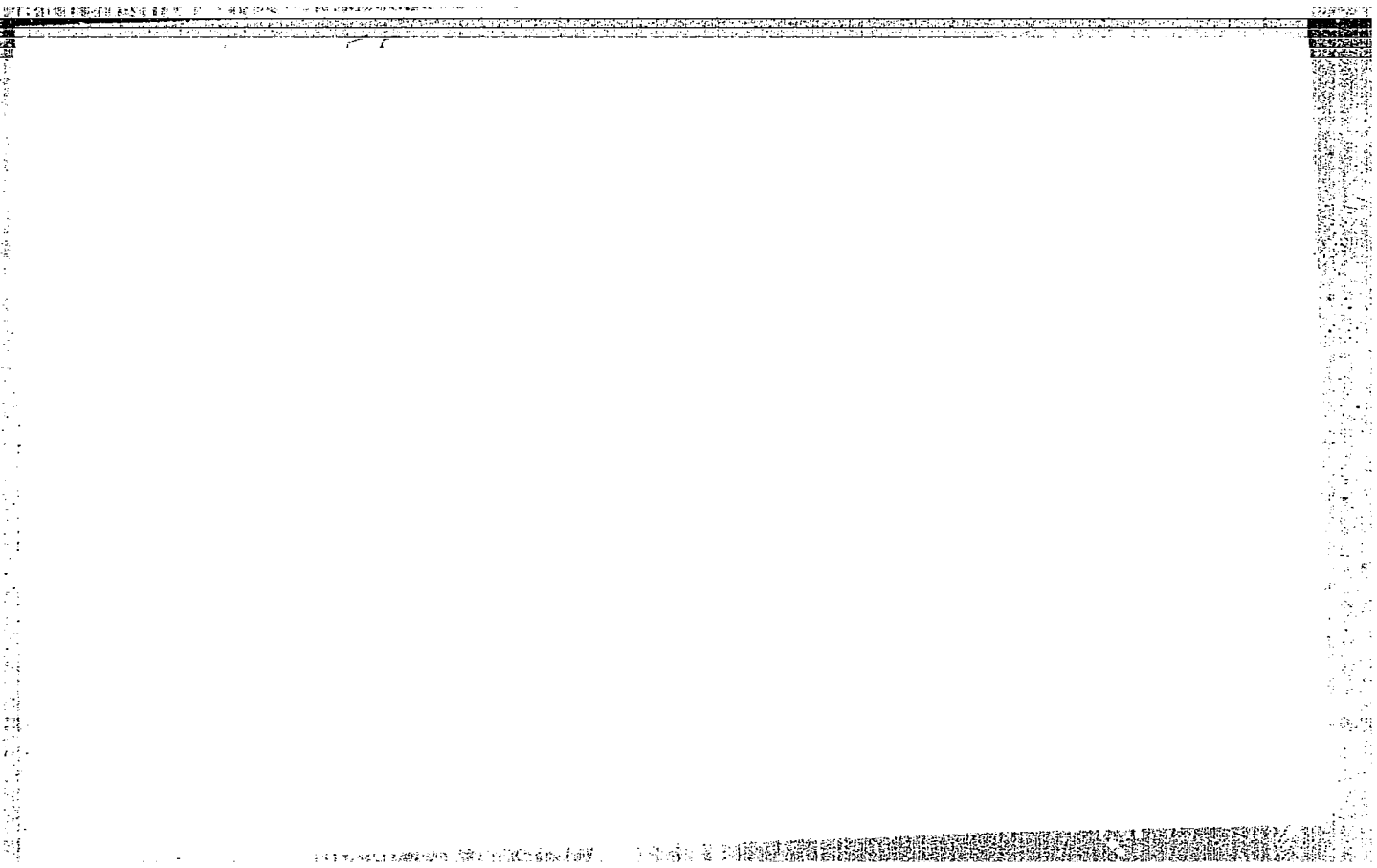
[illegible] of the propagation of an elastic wave in conveyor belts. Vop. rud. transp. no.7:57-63 '63. (MIRA 16:9)

1. Dnepropetrovskiy gornyy institut.
(Conveying machinery--Elastic properties)

ZAVORONKOV, O. G., SINELNIKOV, K. D., ZEYDLIK, P. M., FAYNBERG, Ya. O., NERKASHEVICH, A. M., ZAVGORODNOV, O. G., SAFRONOV, B. G., DUBOVOY, L. V. and LUTSENKO, E. I.

"Experimental Research of High Frequency Properties of Plasma and Magneto-Hydrodynamic Shock Waves."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sep 58.



ZAVGORODNYAYA, N.G.

Fish with colorless blood. Biol. v shkole no.2:96 Mr-Ap '62.
(MIRA 15:2)

1. Kafedra ikhtiologii Moskovskogo gosudarstvennogo universiteta imeni Lomonosova.

(Fishes--Physiology)

ZAVGORODNAYA, V.K.

Diurnal dynamics of flight of the honeybee family (Hymenoptera, Apoidea) in leguminous forage crops. Ent.obos. 33:182-185 '53. (MLRA 7:5)

1. Voronezhskaya stantsiya zashchity rasteniy. (Bees)

66485

SOV/20-129-1-31/64

~~5(3)~~ 5.3300(A)

AUTHORS: Zavgorodniy, S. V., Zavgorodnyaya, V. L.

TITLE: Synthesis and Autoxidation of p-Isopropylcyclohexylbenzene

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 1, pp 113 - 116 (USSR)

ABSTRACT: In the paper under review the authors investigated the synthesis of the above mentioned substance (I) by cycloalkylation of isopropylbenzene with cyclohexene in the presence of the catalyst $BF_3 \cdot H_3PO_4$ as well as its autoxidation by air. In order to find the optimum conditions of synthesis the reaction was tested at various molar ratios and temperatures between 20 and 85°. It was found that the two substances participating in the reaction react readily and give a 78% yield of the final product (I). For temperatures of 20-25° and a reaction time of 19 hours, the optimum molar ratio of isopropylbenzene:cyclohexene: catalyst was 3:1:0.3. About 6% polycyclohexylisopropylbenzenes (see Reaction Diagram) are formed under these conditions. The substance mentioned in the title has 2 tertiary carbon atoms.

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Synthesis and Autoxidation of p-Isopropylcyclohexylbenzene SOV/20-129-1-31/64

Molecular oxygen attacks mainly these C atoms and thus forms hydroperoxides (see Diagram). After having been purified by 70% H_2SO_4, (I) is comparatively easily oxidized by oxygen from the air in the presence of manganese resinate or with alkaline additions at 95-120°. The oxygen attack is aimed at the tertiary C atom of the isopropyl group and is stopped by the formation of hydroperoxide of (I) as (II). Since it is more difficult to oxidize the other tertiary C atom (of the cyclohexyl radical) by molecular oxygen, the quantities of cumylcyclohexyl (II) formed are very small. As can be seen from the curves of figure 1 autoxidation of (I) takes place in the following way: At first hydroperoxide of (I) is accumulated in the solution to a well defined maximum. Then hydroperoxide decomposes until it disappears entirely from the reaction mixture. p-Cyclohexylacetophenone and p-cyclohexylphenol are the final products of this oxidation. If manganese resinate alone is added to (I), instead of further resinate alkaline additions (soda or calcium hydroxide)oxidation proceeds much slower. If the concentration of hydroperoxide is highest (61%), is in the presence of manganese resinate, soda, and barium peroxide at 118-120°, and has an air circulation of 30 l/h, autoxidation of (I) proceeds at the fastest rate (6% per

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Synthesis and Autoxidation of p-Isopropylcyclohexylbenzene SOV/20-129-1-31/64

per hour). The autoxidation rate depends on temperature (Fig 2) as well as on the rate of air circulation. If hydroperoxide is split with concentrated H_2SO_4 cyclohexylphenol and acetone are formed. p-Isopropylphenol was separated in the form of tracesonly. There are 2 figures, 3 tables, and 3 references, 1 of which is Soviet.

ASSOCIATION: Voronezhskiy gosudarstvennyy universitet (Voronezh State University)

PRESENTED: June 2, 1959, by A. V. Topchiyev, Academician

SUBMITTED: June 2, 1959

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Card 3/3

GALUSHKO, V.P.; ZAVGORODNYAYA, Ye.F.

Cathodic behavior of a cuprous oxide electrode. Ukr.khim.zhur. 28 no.4:496-499 '62. (MIRA 15:8)

1. Dnepropetrovskiy gosudarstvennyy universitet imeni 300-letiya vossoyedineniya Ukrainy s Rossiyey.
(Electrodes, Copper)

ZEMLYAKOV, Ivan Petrovich; ZAVGORODNYI, V.K., inzh., retsenzent; YEVSTAF'YEVA, N.P., red.; DOBRITSINA, R.I., tekhn. red.

[Machine parts made of capron] Kapron - material dlia detalei machiny. Moskva, Mashgiz, 1961. 97 p. (MIRA 15:1)
(Nylon) (Machinery—Construction)

ABRAMOV, L.M., inzh.; ZHURAVSKIY, L.M., inzh.; ZAVGORODNYI, V.K., inzh., retsenzent; PREOBRAZHENSKIY, A.Yu., red.; EL'KIND, V.D., tekhn. red.

[Use of plastics in the manufacture of textile machinery] Primenenie plastmass v tekstil'nom mashinostroenii; iz opyta proizvodstva priadil'nogo oborudovaniia. Moskva, Mashgiz, 1963. 113 p. (MIRA 16:11)
(Spinning machinery) (Plastics)

AUTHORS: Zavgorodnyy, N.S., Sidochenko, I.M. SOV-101-58-5-6/10

TITLE: A New Method for the Preparation of Raw Material Mixture to Be Fired in Automatic Shaft Furnaces (Novyy metod prigotovleniya syr'yevoy smesi dlya obzhiga v avtomaticheskikh shakhtnykh pechakh)

PERIODICAL: Tsement, 1958, Nr 5, pp 25-26 (USSR)

ABSTRACT: In the Amvrosiyevskiy Cement Plant Nr 1 the productivity of the shaft furnaces has been increased by various measures to such an extent that the production of the raw material workshop could not supply the needed quantities of raw material. To solve this problem, the moistening of the ground raw material by normal cement slime rather than by water is recommended. The consumption of slime per day amounts to 600 m^3 which ensures the additional processing of 300 tons of clinkers per day. For 4 furnaces, 33.5 tons of clinkers must be ground per hour. The slime has a moisture content of 48% and is mixed with ground clinkers with a moisture content of 1%. The briquets have a moisture content of 18%. The new method ensures an adequate supply to all furnaces and saves 8,793 tons of fuel per year. It increases the productivity of the raw material workshop by 22.9%. The homo-

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A New Method for the Preparation of Raw Material Mixture to Be Burned in Automatic Shaft Furnaces

geneity of the briquets is also increased. The prime cost is reduced by 10 - 11%.

ASSOCIATION: Amvrosiyevskiy tsementnyy zavod (Amvrosiyevskiy Cement Plant)

1. Cement--Processing 2. Materials--Preparation 3. Furnaces --Performance

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